

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:  $\angle$ Date Processed by STIC:

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS. PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,

TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221 Effective 12/13/03: TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses.

- 1. EFS-Bio (<a href="http://www.uspto.gov/ebc/efs/downloads/documents.htm">http://www.uspto.gov/ebc/efs/downloads/documents.htm</a>, EFS Submission User Manual - cPAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 1450
- 3. Hand Carry directly to (EFFECTIVE 12/01/03): U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two. 2011 South Clark Place, Arlington, VA 22202
- 4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office. Box Sequence, Room 1003-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/798,579
ATTN: NEW RULES CAS	es: Please disregard english "A	LPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE
IWrapped Nucleic Wrapped Aminos	S The number/text at the end of each to	ne "wrapped" down to the next line. This may occur if your file ter creating it. Please adjust your right margin to .3; this will
2Invalid Line Leng	th The rules require that a line not exce	ed 72 characters in length. This includes white spaces.
3Misaligned Amino Numbering		acid is misaligned. Do not use tab codes between numbers;
4_V_Non-ASCîI	The submitted file was not saved in A ensure your subsequent submission	SCII(DOS) text, as required by the Sequence Rules. Please is saved in ASCII text.
5Variable Length		representing more than one residue. Per Sequence Rules, single residue. Please present the maximum number of each icate in the <220>-<223> section that some may be missing.
6Patentin 2.0 "bug"	previously coded nucleic acid sequence	used the <220>-<223> section to be missing from amino acid t, Patentln would automatically generate this section from the e. Please manually copy the relevant <220>-<223> section to This applies to the mandatory <220>-<223> sections for
7Skipped Sequences (OLD RULES)	(2) INFORMATION FOR SEQ ID NO (i) SEQUENCE CHARACTER	onal, please insert the following lines for each skipped sequence: 0:X: (insert SEQ ID NO where "X" is shown) 2:ISTICS: (Do not insert any subheadings under this heading) 2:ID NO:X: (insert SEQ ID NO where "X" is shown)
	Please also adjust the "(ii) NUMBER C	OF SEQUENCES:" response to include the skipped sequences.
8Skipped Sequences (NEW RULES)	Sequence(s) missing. If intent <210> sequence id number <400> sequence id number 000	ional, please insert the following lines for each skipped sequence.
(1.2.1. ROLLS)	Use of n's and/or Xaa's have been detec Per 1.823 of Sequence Rules, use of <2: In <220> to <223> section, please expla	ted in the Sequence Listing.  20>-<223> is MANDATORY if n's or Xaa's are present.  in location of n or Xaa, and which residue n or Xaa represents.
10Invalid <213> Response	Per 1.823 of Sequence Rules, the only v	alid <213> responses are: Unknown, Artificial Sequence, or -<223> section is required when <213> response is Unknown or
,	"Unknown." Please explain source of gr	> "Feature" and associated numeric identifiers and responses. Y if <213> "Organism" response is "Artificial Sequence" or enetic material in <220> to <223> section. 1. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
"bug" r	Please do not use "Copy to Disk" function esulting in missing mandatory numerical	n of PatentIn version 2.0. This causes a corrupted file, dentifiers and responses (as indicated on raw sequence or or any other manual means to copy file to floppy disk.
		; "Xaa" can only represent a single amino acid



**IFWO** 

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/798,579

DATE: 03/22/2004 TIME: 10:19:03

ATION: US/10/798,579 TIME: 10:19

Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

```
2 <110> APPLICANT: Kirin Beer Kabushiki Kaisha; Japan International Research Center f
              or Agricultural Sciences
      5 <120> TITLE OF INVENTION: A production of plants having improved rooting efficiency
and vase
              life by using environmental stress-resistant gene
                                            Does Not Comply Corrected Diskette Needed

ON error

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      8 <130> FILE REFERENCE: PH-2034
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/798,579
C--> 10 <141> CURRENT FILING DATE: 2004-03-12
     10 <150> PRIOR APPLICATION NUMBER: JP 2003-071082
     11 <151> PRIOR FILING DATE: 2003-03-14
     13 <160> NUMBER OF SEQ ID NOS: 30
ERRORED SEQUENCES
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                 20 75 30 25
Lys Lys Pro Ala Gly Arg Lys Lys Phe Arg Glu Thr Arg His
      83 Cys Prg
                 Tyr Arg Gly Val Arg Arg Arg Asn Ser Gly Lys Trp Val Cys
E--> 86
      87 Glu Val Arg Glu Pro Asn Lys Lys Thr Arg Ile Trp Leu Gly Thr Phe 88 65 7076
E--> 88 65
      89 Gln Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Leu Ala
90 $5 $5 96 $70
      91 Leu Arg Gly Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala
                           195
               100 /00
      93 Leu Arg Ile Pro Gly Ser Thr Cys Ala Lys Asp Ile Gln Lys Ala Ala
                                      125
             11/5 //>
 E--> 94
      95 Ala Clu Ala Ala Teu Ala Phe Gln Asp Glu Met Cys Asp Ala Thr Thr 96 13630 135 /3240
      96 130 135 /3140
97 Asp His Gly Phe Asp Met Glu Gl
98 145 150 155
 E--> 96
                                 Glu Glu Thr Leu Val Glu Ala Ile Tyr Thr (60)
                     180
      99 Ala Glu Gln Ser Glu Asn Ala Phe Tyr, Met His Asp Glu Ala Met Phe
                                           1/5/70
                       165 1/10
      101 Glu Met Pro Ser Leu Leu Ala Asn Met Ala Glu Gly Met Leu Leu Pro
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E--> 102

PATENT APPLICATION: US/10/798,579

DATE: 03/22/2004

TIME: 10:19:03

Input Set : A:\PTO.DA.txt

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F>	215	Thr	Ser !	Ser-	Gli	Ser	Glu	Val	Cys	Thr	Val	Glu	Thr	Pro	Gly	Cys	Val		
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_	229	Asp	Met ]	Phe	Asp	Val	Asp	Glı	ı Leu	Leu	Arg	Asp	Leu	Asn	с СТУ	ASP	Asp		
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PATENT APPLICATION: US/10/798,579

DATE: 03/22/2004 TIME: 10:19:03

Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

2 SAMPOIS 237 Gly Asn Gly Phe Phe Asp Asp Leu Ser Tyr Leu Asp Leu Glu Asn 335 325 330 E--> 238300 <210> SEQ ID NO: 6 301 <211> LENGTH: 213 302 <212> TYPE: PRT 303 <213> ORGANISM: Arabidopsis thaliana 305 <400> SEQUENCE: 6 306 Met Asn Ser Phe Ser Ala Phe Ser Glu Met Phe Gly Ser Asp Tyr Glu 15 10 308 Pro Gln Gly Gly Asp Tyr Cys Pro Thr Leu Ala Thr Ser Cys Pro Lys 5 E--> 307 130 20 25 310 Lys Pro Ala Gly Arg Lys Lys Phe Arg Glu Thr Arg His Pro Ile Tyr E--> 309 35 40 45 312 Arg Gly Val Arg Gln Arg Asn Ser Gly Lys Trp Val Ser Glu Val Arg E--> 311E--> 313 50 55 60 314 Glu Pro Asn Lys Lys Thr Arg Ile Trp Leu Gly Thr Phe Gln Thr Ala E--> 315 65 70 75 80 316 Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Leu Ala Leu Arg Gly 95 85 90 318 Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala Trp Arg Leu Arg Ile 100 105 110 320 Pro Glu Ser Thr Cys Ala Lys Asp Ile Gln Lys Ala Ala Ala Glu Ala E--> 319 120 125 322 Ala Leu Ala Phe Gln Asp Glu Thr Cys Asp Thr Thr Thr Asn His 130 135 140 324 Gly Leu Asp Met Glu Glu Thr Met Val Glu Ala Ile Tyr Thr Pro Glu E--> 323 150 155 160 326 Gln Ser Glu Gly Ala Phe Tyr Met Asp Glu Glu Thr Met Phe Gly Met E--> 325 145170 175 328 Pro Thr Leu Leu Asp Asn Met Ala Glu Gly Met Leu Leu Pro Pro 165 190 185 E--> 329 180 330 Ser Val Gln Trp Asn His Asn Tyr Asp Gly Glu Gly Asp Gly Asp Val 205 195 200 332 Ser Leu Trp Ser Tyr 210 E--> 333 393 <210> SEQ ID NO: 8 394 <211> LENGTH: 216 395 <212> TYPE: PRT 396 <213> ORGANISM: Arabidopsis thaliana 398 <400> SEQUENCE: 8 399 Met Asn Ser Phe Ser Ala Phe Ser Glu Met Phe Gly Ser Asp Tyr Glu 10 401 Ser Pro Val Ser Ser Gly Gly Asp Tyr Ser Pro Lys Leu Ala Thr Ser 5 E-->400 1 E--> 402 20 25 30 403 Cys Pro Lys Lys Pro Ala Gly Arg Lys Lys Phe Arg Glu Thr Arg His 45 E--> 404 35 40 405 Pro Ile Tyr Arg Gly Val Arg Gln Arg Asn Ser Gly Lys Trp Val Cys 60 407 Glu Leu Arg Glu Pro Asn Lys Lys Thr Arg Ile Trp Leu Gly Thr Phe 55 E--> 406

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80 75 409 Gln Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Ile Ala E--> 408 65 95 90 411 Leu Arg Gly Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala Trp Arg E-->410110 100 105 413 Leu Arg Ile Pro Glu Ser Thr Cys Ala Lys Glu Ile Gln Lys Ala Ala E--> 412 125 415 Ala Glu Ala Ala Leu Asn Phe Gln Asp Glu Met Cys His Met Thr Thr 120 140 135 417 Asp Ala His Gly Leu Asp Met Glu Glu Thr Leu Val Glu Ala Ile Tyr E--> 416 160 E--> 418 145 150 155 419 Thr Pro Glu Gln Ser Gln Asp Ala Phe Tyr Met Asp Glu Glu Ala Met 170 175 421 Leu Gly Met Ser Ser Leu Leu Asp Asn Met Ala Glu Gly Met Leu Leu 165  $E^{--}>420$ 190 E--> 422 180 185 423 Pro Ser Pro Ser Val Gln Trp Asn Tyr Asn Phe Asp Val Glu Gly Asp 205 195 200 E-->424425 Asp Asp Val Ser Leu Trp Ser Tyr E--> 426 210 215 517 <210> SEQ ID NO: 10 518 <211> LENGTH: 330 519 <212> TYPE: PRT 520 <213> ORGANISM: Arabidopsis thaliana W--> 521 <400> SEQUENCE: 10 522 Met Ala Val Tyr Glu Gln Thr Gly Thr Glu Gln Pro Lys Lys Arg Lys 5 10 15 524 Ser Arg Ala Arg Ala Gly Gly Leu Thr Val Ala Asp Arg Leu Lys Lys E--> 523 1 30 25 E--> 525 20 526 Trp Lys Glu Tyr Asn Glu Ile Val Glu Ala Ser Ala Val Lys Glu Gly 45 E--> 527 35 40 528 Glu Lys Pro Lys Arg Lys Val Pro Ala Lys Gly Ser Lys Lys Gly Cys 50 55 60 530 Met Lys Gly Lys Gly Gly Pro Asp Asn Ser His Cys Ser Phe Arg Gly E--> 531 65 70 75 80 532 Val Arg Gln Arg Ile Trp Gly Lys Trp Val Ala Glu Ile Arg Glu Pro 90 95 85 534 Lys Ile Gly Thr Arg Leu Trp Leu Gly Thr Phe Pro Thr Ala Glu Lys 105 110 536 Ala Ala Ser Ala Tyr Asp Glu Ala Ala Thr Ala Met Tyr Gly Ser Leu 100 E--> 535 115 120 125 538 Ala Arg Leu Asn Phe Pro Gln Ser Val Gly Ser Glu Phe Thr Ser Thr E--> 537 140 135 540 Ser Ser Gln Ser Glu Val Cys Thr Val Glu Asn Lys Ala Val Val Cys E--> 539 130 160 155 E--> 541 145 150 542 Gly Asp Val Cys Val Lys His Glu Asp Thr Asp Cys Glu Ser Asn Pro 175 165 170 544 Phe Ser Gln Ile Leu Asp Val Arg Glu Glu Ser Cys Gly Thr Arg Pr $\phi$ 190 180 185 546 Asp Ser Cys Thr Val Gly His Gln Asp Met Asn Ser Ser Leu Asn Tyr E--> 545

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205 200 548 Asp Leu Leu Glu Phe Glu Gln Gln Tyr Trp Gly Gln Val Leu Gln E--> 547215 220 550 Glu Lys Glu Lys Pro Lys Gln Glu Glu Glu Glu Ile Gln Gln Gln E--> 549 235 240 230 E--> 551 225 552 Gln Glu Gln Gln Gln Gln Leu Gln Pro Asp Leu Leu Thr Val Ala 255 250 245 554 Asp Tyr Gly Trp Pro Trp Ser Asn Asp Ile Val Asn Asp Gln Thr Ser E--> 553270 260 265 556 Trp Asp Pro Asn Glu Cys Phe Asp Ile Asn Glu Leu Leu Gly Asp Leu E--> 555 275 280 285 558 Asn Glu Pro Gly Pro His Gln Ser Gln Asp Gln Asn His Val Asn Ser 300 290 295 560 Gly Ser Tyr Asp Leu His Pro Leu His Leu Glu Pro His Asp Gly His E--> 559 E--> 561 305 310 315 320 562 Glu Phe Asn Gly Leu Ser Ser Leu Asp Ile 330 325 E--> 563 584 <210> SEQ ID NO: 12 585 <211> LENGTH: 224 586 <212> TYPE: PRT 587 <213> ORGANISM: Arabidopsis thaliana 589 <400> SEQUENCE: 12 590 Met Asn Pro Phe Tyr Ser Thr Phe Pro Asp Ser Phe Leu Ser Ile Ser 15 10 593 Asp His Arg Ser Pro Val Ser Asp Ser Ser Glu Cys Ser Pro Lys Leu 5 E--> 591 1 25 596 Ala Ser Ser Cys Pro Lys Lys Arg Ala Gly Arg Lys Lys Phe Arg Glu E--> 59445 599 Thr Arg His Pro Ile Tyr Arg Gly Val Arg Gln Arg Asn Ser Gly Lys 40 E--> 597 50 55 60 602 Trp Val Cys Glu Val Arg Glu Pro Asn Lys Lys Ser Arg Ile Trp Leu E--> 603 65 70 75 80 605 Gly Thr Phe Pro Thr Val Glu Met Ala Ala Arg Ala His Asp Val Ala 95 85 90 608 Ala Leu Ala Leu Arg Gly Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser E--> 606 110 100 105 611 Ala Trp Arg Leu Arg Ile Pro Glu Thr Thr Cys Pro Lys Glu Ile Gln E--> 609125 115 120 614 Lys Ala Ala Ser Glu Ala Ala Met Ala Phe Gln Asn Glu Thr Thr E--> 612140 135 617 Glu Gly Ser Lys Thr Ala Ala Glu Ala Glu Glu Ala Ala Gly Glu Gly 160 **1**50 **1**55 620 Val Arg Glu Gly Glu Arg Arg Ala Glu Glu Gln Asn Gly Gly Val Phe E--> 618 145 175 170 165 623 Tyr Met Asp Asp Glu Ala Leu Leu Gly Met Pro Asn Phe Phe Glu Asn 190 185 626 Met Ala Glu Gly Met Leu Leu Pro Pro Pro Glu Val Gly Trp Asn His 200 205 195 629 Asn Asp Phe Asp Gly Val Gly Asp Val Ser Leu Trp Ser Phe Asp Glu L Sprids

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Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

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Input Set : A:\PTO.DA.txt

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735 Met Phe Arg Pro Val Asp Leu Glu Ser Gly Ile Thr Val Leu Pro Cys 115 120 125 738 Ala Gly Asp Asp Val Asp Leu Gly Phe Gly Ser Gly Ser Gly  $E^{--}>736$ 140 130 135 741 Ser Gly Ser Glu Glu Arg Asn Ser Ser Ser Tyr Gly Phe Gly Asp Tyr E--> 739160 155 744 Glu Glu Val Ser Thr Thr Met Met Arg Leu Ala Glu Gly Pro Leu Met 150 E--> 742 145 175 170 746 Ser Pro Pro Arg Ser Tyr Met Glu Asp Met Thr Pro Thr Asn Val Tyr 165 190 180 185 749 Thr Glu Glu Glu Met Cys Tyr Glu Asp Met Ser Leu Trp Ser Tyr Arg E--> 747 205 200 195 E--> 750 752 Tyr 781 <210> SEQ ID NO: 18 782 <211> LENGTH: 341 783 <212> TYPE: PRT 784 <213> ORGANISM: Arabidopsis thaliana 786 <400> SEQUENCE: 18 787 Met Pro Ser Glu Ile Val Asp Arg Lys Arg Lys Ser Arg Gly Thr Arg 10 790 Asp Val Ala Glu Ile Leu Arg Gln Trp Arg Glu Tyr Asn Glu Gln Ile 5 E--> 788 1 30 25 793 Glu Ala Glu Ser Cys Ile Asp Gly Gly Gly Pro Lys Ser Ile Arg Lys 20 40 796 Pro Pro Lys Gly Ser Arg Lys Gly Cys Met Lys Gly Lys Gly Gly 35 799 Pro Glu Asn Gly Ile Cys Asp Tyr Arg Gly Val Arg Gln Arg Arg Trp 55 E --> 797E--> 800 65 70 75 80 801 Gly Lys Trp Val Ala Glu Ile Arg Glu Pro Asp Gly Gly Ala Arg Leu 95 90 804 Trp Leu Gly Thr Phe Ser Ser Ser Tyr Glu Ala Ala Leu Ala Tyr Asp 85 110 105 807 Glu Ala Ala Lys Ala Ile Tyr Gly Gln Ser Ala Arg Leu Asn Leu Pro E--> 805 120 125 810 Glu Ile Thr Asn Arg Ser Ser Ser Thr Ala Ala Thr Ala Thr Val Ser 115 E--> 808 140 813 Gly Ser Val Thr Ala Phe Ser Asp Glu Ser Glu Val Cys Ala Arg Glu 135 E--> 811 160 150 155 816 Asp Thr Asn Ala Ser Ser Gly Phe Gly Gln Val Lys Leu Glu Asp Cys E--> 814 145 175 165 170 819 Ser Asp Glu Tyr Val Leu Leu Asp Ser Ser Gln Cys Ile Lys Glu Glu 180 185 190 822 Leu Lys Gly Lys Glu Glu Val Arg Glu Glu His Asn Leu Ala Val Gly E--> 820 205 195 200 825 Phe Gly Ile Gly Gln Asp Ser Lys Arg Glu Thr Leu Asp Ala Trp Leu 220 828 Met Gly Asn Gly Asn Glu Gln Glu Pro Leu Glu Phe Gly Val Asp Glu 215 E--> 826 240 235 230 830 Thr Phe Asp Ile Asn Glu Leu Leu Gly Ile Leu Asn Asp Asn Asn Val E--> 829 225

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Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

255 250 245 833 Ser Gly Gln Glu Thr Met Gln Tyr Gln Val Asp Arg His Pro Asn Phe E--> 831 270 E--> 834 260 265 836 Ser Tyr Gln Thr Gln Phe Pro Asn Ser Asn Leu Leu Gly Ser Leu Asn 285 275 280 839 Pro Met Glu Ile Ala Gln Pro Gly Val Asp Tyr Gly Cys Pro Tyr Val E--> 837300 295 E--> 840 842 Gln Pro Ser Asp Met Glu Asn Tyr Gly Ile Asp Leu Asp His Arg Arg 310 315 320 E--> 843 305 845 Phe Asn Asp Leu Asp Ile Gln Asp Leu Asp Phe Gly Gly Asp Lys Asp 335 325 330 E--> 846848 Val His Gly Ser Thr 340 E--> 849870 <210> SEQ ID NO: 20 871 <211> LENGTH: 206 872 <212> TYPE: PRT 873 <213> ORGANISM: Arabidopsis thaliana 875 <400> SEQUENCE: 20 876 Met Ser Ser Ile Glu Pro Lys Val Met Met Val Gly Ala Asn Lys Lys 5 10 15 E--> 877 1 879 Gln Arg Thr Val Gln Ala Ser Ser Arg Lys Gly Cys Met Arg Gly Lys 30 25 20 E--> 880 882 Gly Gly Pro Asp Asn Ala Ser Cys Thr Tyr Lys Gly Val Arg Gln Arg 35 40 45 885 Thr Trp Gly Lys Trp Val Ala Glu Ile Arg Glu Pro Asn Arg Gly Ala E--> 883 50 55 60 E--> 886 888 Arg Leu Trp Leu Gly Thr Phe Asp Thr Ser Arg Glu Ala Ala Leu Ala E--> 889 65 70 75 891 Tyr Asp Ser Ala Ala Arg Lys Leu Tyr Gly Pro Glu Ala His Leu Asn 85 90 95 E--> 892 894 Leu Pro Glu Ser Leu Arg Ser Tyr Pro Lys Thr Ala Ser Ser Pro Ala 110 105 100 897 Ser Gln Thr Thr Pro Ser Ser Asn Thr Gly Gly Lys Ser Ser Ser Asp 115 120 125 900 Ser Glu Ser Pro Cys Ser Ser Asn Glu Met Ser Ser Cys Gly Arg Val 135 140 E--> 901 903 Thr Glu Glu Ile Ser Trp Glu His Ile Asn Val Asp Leu Pro Val Met 150 155 160 E--> 904 145 906 Asp Asp Ser Ser Ile Trp Glu Glu Ala Thr Met Ser Leu Gly Phe Pro E--> 907 165 170 175 909 Trp Val His Glu Gly Asp Asn Asp Ile Ser Arg Phe Asp Thr Cys Ile 180 185 190 912 Ser Gly Gly Tyr Ser Asn Trp Asp Ser Phe His Ser Pro Leu E--> 910 205 200 195 E--> 913 938 <210> SEQ ID NO: 22 939 <211> LENGTH: 244 940 <212> TYPE: PRT 941 <213> ORGANISM: Arabidopsis thaliana 943 <400> SEQUENCE: 22

N Sport errors

PATENT APPLICATION: US/10/798,579

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Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

944 Met Glu Lys Glu Asp Asn Gly Ser Lys Gln Ser Ser Ser Ala Ser Val 15 5 10 947 Val Ser Ser Arg Arg Arg Arg Val Val Glu Pro Val Glu Ala Thr E--> 945 120 25 30 950 Leu Gln Arg Trp Glu Glu Glu Gly Leu Ala Arg Ala Arg Val Gln 45 40 953 Ala Lys Gly Ser Lys Lys Gly Cys Met Arg Gly Lys Gly Gly Pro Glu E--> 951 50 60 55 956 Asn Pro Val Cys Arg Phe Arg Gly Val Arg Gln Arg Val Trp Gly Lys E--> 954 80 70 75 959 Trp Val Ala Glu Ile Arg Glu Pro Val Ser His Arg Gly Ala Asn Ser E--> 957 65 85 90 95 962 Ser Arg Ser Lys Arg Leu Trp Leu Gly Thr Phe Ala Thr Ala Ala Gl E--> 960 105 110 965 Ala Ala Leu Ala Tyr Asp Arg Ala Ala Ser Val Met Tyr Gly Pro Tyr E--> 963 125 120 968 Ala Arg Leu Asn Phe Pro Glu Asp Leu Gly Gly Arg Lys Lys Ask 115 140 135 E--> 969 970 Glu Glu Ala Glu Ser Ser Gly Gly Tyr Trp Leu Glu Thr Asn Lys Ala 160 155 E--> 971 145 150 973 Gly Asn Gly Val Ile Glu Thr Glu Gly Gly Lys Asp Tyr Val Val Tyr 175 165 170 E--> 974 976 Asn Glu Asp Ala Ile Glu Leu Gly His Asp Lys Thr Gln Asn Pro Met 190 185 180 979 Thr Asp Asn Glu Ile Val Asn Pro Ala Val Lys Ser Glu Glu Gly Tyr 205 195 200 982 Ser Tyr Asp Arg Phe Lys Leu Asp Asn Gly Leu Leu Tyr Asn Glu Pro E --> 980E--> 983 210 215 220 985 Gln Ser Ser Tyr His Gln Gly Gly Phe Asp Ser Tyr Phe Glu 240 235 230 E--> 986 225 988 Tyr Phe Arg Phe 1013 <210> SEQ ID NO: 24 1014 <211> LENGTH: 277 1015 <212> TYPE: PRT 1016 <213> ORGANISM: Arabidopsis thaliana 1018 <400> SEQUENCE: 24 1019 Met Glu Lys Ser Ser Ser Met Lys Gln Trp Lys Lys Gly Pro Ala Arg 15 10 1022 Gly Lys Gly Gly Pro Gln Asn Ala Leu Cys Gln Tyr Arg Gly Val Arg 5 E--> 1020 1 20 25 30 E--> 1023 1025 Gln Arg Thr Trp Gly Lys Trp Val Ala Glu Ile Arg Glu Pro Lys Lys 35 40 1028 Arg Ala Arg Leu Trp Leu Gly Ser Phe Ala Thr Ala Glu Glu Ala Ala E--> 1026 60 55 1031 Met Ala Tyr Asp Glu Ala Ala Leu Lys Leu Tyr Gly His Asp Ala Tyr E--> 1029 80 75 1034 Leu Asn Leu Pro His Leu Gln Arg Asn Thr Arg Pro Ser Leu Ser Asn 70 85 90 1037 Ser Gln Arg Phe Lys Trp Val Pro Ser Arg Lys Phe Ile Ser Met Phe E--> 1035

Ksames

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/798,579

DATE: 03/22/2004
TIME: 10:19:03

Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

110 105 1040 Pro Ser Cys Gly Met Leu Asn Val Asn Ala Gln Pro Ser Val His Ile 100 120 125 1043 Ile Gln Gln Arg Leu Glu Glu Leu Lys Lys Thr Gly Leu Leu Ser Gln E--> 1041140 135 1046 Ser Tyr Ser Ser Ser Ser Ser Ser Thr Glu Ser Lys Thr Asn Thr Ser E--> 1044160 155 150 1049 Phe Leu Asp Glu Lys Thr Ser Lys Gly Glu Thr Asp Asn Met Phe Glu E--> 1047 145 165 170 175 1052 Gly Gly Asp Gln Lys Lys Pro Glu Ile Asp Leu Thr Glu Phe Leu Gln E--> 1050 E--> 1053 180 185 190 1054 Gln Leu Gly Ile Leu Lys Asp Glu Asn Glu Ala Glu Pro Ser Glu Val 195 200 205 1057 Ala Glu Cys His Ser Pro Pro Pro Trp Asn Glu Gln Glu Glu Thr Gly E--> 1055 220 E--> 1058 210 215 1060 Ser Pro Phe Arg Thr Glu Asn Phe Ser Trp Asp Thr Leu Ile Glu Met E--> 1061 225 230 235 240 1063 Pro Arg Ser Glu Thr Thr Met Gln Phe Asp Ser Ser Asn Phe Gly 245 250 255 1066 Ser Tyr Asp Phe Glu Asp Asp Val Ser Phe Pro Ser Ile Trp Asp Tyr E--> 1064 270 260 265 E--> 1067 1069 Tyr Gly Ser Leu Asp 275 E--> 1070 1096 <210> SEQ ID NO: 26 1097 <211> LENGTH: 306 1098 <212> TYPE: PRT 1099 <213> ORGANISM: Arabidopsis thaliana 1101 <400> SEQUENCE: 26 1102 Glu Glu Glu Gln Pro Pro Ala Lys Lys Arg Asn Met Gly Arg Ser Arg 15 5 10 1105 Lys Gly Cys Met Lys Gly Lys Gly Gly Pro Glu Asn Ala Thr Cys Thr E--> 1106 20 25 30 1108 Phe Arg Gly Val Arg Gln Arg Thr Trp Gly Lys Trp Val Ala Glu Ile E--> 1109 35 40 45 1110 Arg Glu Pro Asn Arg Gly Thr Arg Leu Trp Leu Gly Thr Phe Asn Thr 60 50 55 1113 Ser Val Glu Ala Ala Met Ala Tyr Asp Glu Ala Ala Lys Lys Leu Tyr E--> 1111 70 75 80 E--> 1114 65 1116 Gly His Glu Ala Lys Leu Asn Leu Val His Pro Gln Gln Gln Gln 85 90 95 1119 Val Val Val Asn Arg Asn Leu Ser Phe Ser Gly His Gly Ser Gly Ser E--> 1117 110 100 105 1122 Trp Ala Tyr Asn Lys Leu Asp Met Val His Gly Leu Asp Leu Gly E--> 1120 120 125 1125 Leu Gly Gln Ala Ser Cys Ser Arg Gly Ser Cys Ser Glu Arg Ser Ser 140 130 135 1128 Phe Leu Gln Glu Asp Asp Asp His Ser His Asn Arg Cys Ser Ser Ser E--> 1126 150 155 160 E--> 1129 145 1131 Ser Gly Ser Asn Leu Cys Trp Leu Leu Pro Lys Gln Ser Asp Ser Gln 15pme errors

PATENT APPLICATION: US/10/798,579

DATE: 03/22/2004 TIME: 10:19:03

Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

175 170 165 1134 Asp Gln Glu Thr Val Asn Ala Thr Thr Ser Tyr Gly Gly Glu Gly 185 190 180 E--> 1135 1137 Gly Gly Ser Thr Leu Thr Phe Ser Thr Asn Leu Lys Pro Lys Asn Leu 205 200 195 1139 Met Ser Gln Asn Tyr Gly Leu Tyr Asn Gly Ala Trp Ser Arg Phe Leu 215 220 210 E--> 1140 1142 Val Gly Gln Glu Lys Lys Thr Glu His Asp Val Ser Ser Ser Cys Gly 230 235 240 E--> 1143 225 1145 Ser Ser Asp Asn Lys Glu Ser Met Leu Val Pro Ser Cys Gly Glu 255 245 250 1148 Arg Met His Arg Pro Glu Leu Glu Glu Arg Thr Gly Tyr Leu Glu Met E--> 1146E--> 1149 260 265 270 1151 Asp Asp Leu Leu Glu Ile Asp Asp Leu Gly Leu Leu Ile Gly Lys Asn E--> 1152 275 280 285 1154 Gly Asp Phe Lys Asn Trp Cys Cys Glu Glu Phe Gln His Pro Trp Asn 300 E--> 1155 290 295 1157 Trp Phe 1158 305 1177 <210> SEQ ID NO: 28 1178 <211> LENGTH: 177 1179 <212> TYPE: PRT 1180 <213> ORGANISM: Arabidopsis thaliana 1182 <400> SEQUENCE: 28 1183 Met Pro Arg Lys Arg Lys Ser Arg Gly Thr Arg Asp Val Ala Glu Ile 15 E--> 1184 1 5 10 1186 Leu Arg Lys Trp Arg Glu Tyr Asn Glu Gln Thr Glu Ala Asp Ser Cys 20 25 30 1189 Ile Asp Gly Gly Ser Lys Pro Ile Arg Lys Ala Pro Pro Lys Arg E--> 1187 E--> 1190 35 40 45 1192 Ser Arg Lys Gly Cys Met Lys Gly Lys Gly Gly Pro Glu Asn Gly Ile 50 55 60 1194 Cys Asp Tyr Thr Gly Val Arg Gln Arg Thr Trp Gly Lys Trp Val Ala E--> 1193 E--> 1195 65 70 75 1197 Glu Ile Arg Glu Pro Gly Arg Gly Ala Lys Leu Trp Leu Gly Thr Phe 85 90 9<u>5</u> 1200 Ser Ser Ser Tyr Glu Ala Ala Leu Ala Tyr Asp Glu Ala Ser Lys Ala 105 110 100 E--> 1201 1203 Ile Tyr Gly Gln Ser Ala Arg Leu Asn Leu Pro Leu Pro Leu Cys 125 120 115 E--> 1204 1206 Gln Ala Arg Leu Leu His Phe Leu Met Asn Leu Lys Phe Val His Val 135 140 E--> 1207 130 1209 Arg Ile Gln Met Gln Asp Leu Val Leu Val Arg Ser Leu Thr Ser Arg E--> 1210 145 150 155 160 1212 Ile Ser Lys Met Leu Ser Pro Ile Thr Ala Leu Val Lys Leu Gly Arg 175 170 165 E--> 1213 1215 Tyr 1228 <210> SEQ ID NO: 30 1229 <211> LENGTH: 18

Esprel errors

DATE: 03/22/2004

PATENT APPLICATION: US/10/798,579

TIME: 10:19:03

Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

1230 <212> TYPE: DNA

1231 <213> ORGANISM: Artificial Sequence

1233 <220> FEATURE:

1234 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

1236 <400> SEQUENCE: 30

18 1237 cgatacgtcg tcatcatc
1240 2/1

E--> 1240

E--> 1241

R SAME Error

Please see

item # 3 

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error

Summery

Shut.

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/798,579

DATE: 03/22/2004 TIME: 10:19:04

Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

```
L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:29 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:32 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:35 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:38 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:41 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:44 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:47 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:50 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:53 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:56 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:59 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:62 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:65 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:68 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:80 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2 L
M:332 Repeated in SeqNo=2
L:116 M:283 W: Missing Blank Line separator, <400> field identifier
L:124 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3 /
L:127 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
L:130 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
L:133 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
L:136 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
L:139 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
L:142 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:145 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:148 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:151 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:154 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:157 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:160 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:163 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:166 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:169 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:172 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:175 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:178 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:181 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:184 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:3
 L:198 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4
 M:332 Repeated in SeqNo=4
 L:258 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5
 L:261 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5
 L:264 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5
 L:267 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5
 L:270 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5
 L:273 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/798,579

DATE: 03/22/2004 TIME: 10:19:04

Input Set : A:\PTO.DA.txt

Output Set: N:\CRF4\03222004\J798579.raw

L:276 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5 L:279 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5 L:282 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5 L:285 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5 L:288 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5 L:291 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5 L:294 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:5 L:307 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:6 M:332 Repeated in SeqNo=6 L:349 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7 L:352 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:7 L:400 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:8 M:332 Repeated in SeqNo=8 L:514 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:1432 M:341 Repeated in SeqNo=9 L:521 M:283 W: Missing Blank Line separator, <400> field identifier L:523 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:10 M:332 Repeated in SeqNo=10 L:591 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:12 M:332 Repeated in SeqNo=12 L:657 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14 M:332 Repeated in SeqNo=14 L:716 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16 M:332 Repeated in SeqNo=16 L:788 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:18 M:332 Repeated in SeqNo=18 L:877 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:20 M:332 Repeated in SeqNo=20 L:945 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:22 M:332 Repeated in SeqNo=22 L:1020 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:24 M:332 Repeated in SeqNo=24 L:1103 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:26 M:332 Repeated in SeqNo=26 L:1184 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:28 M:332 Repeated in SeqNo=28 L:1222 M:283 W: Missing Blank Line separator, <220> field identifier L:1240 M:254 E: No. of Bases conflict, LENGTH:Input:1 Counted:19 SEQ:30 L:1240 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:2\_ M:254 Repeated in SeqNo=30 L:1241 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:2 L:1241 M:252 E: No. of Seq. differs, <211> LENGTH:Input:18 Found:20 SEQ:30